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ABSTRACT

This report presents an evaluation of the Effective Transition (ET) project, an Elementary and Secondary Education Act Title VII-funded project in its second year of operation at Lafayette High School and Pershing Intermediate School in Brooklyn, New York. The project served a total of 300 students of limited English proficiency who were native speakers of Spanish, Cantonese, Mandarin, or other Chinese dialects. Participating students received instruction in English as a Second Language (ESL), native language arts (NLA), and the content area subjects of mathematics, science, social studies, and computer science. The project also included peer tutoring, career advice, staff development workshops, a parental advisory committee, and parent ESL classes. An evaluation of project ET found that it met its objectives for NLA in Cantonese, the content areas of mathematics, science, social studies, and computer education, attendance, curriculum development, career development for advisement, and staff development for increased awareness of pupil needs. The project failed to meet its objectives for ESL, NLA in Spanish, career development for conferences, and staff development for enrollment in university courses. Three appendixes include a list of instructional materials used, class schedules, and a staff survey questionnaire. (MDM)

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# OER Report

Effective Transition
(Project E.T.)
Transitional Bilingual Education Grant T003A10130
FINAL EVALUATION REPORT
1992-93

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Effective Transition
(Project E.T.)
Transitional Bilingual Education Grant T003A10130
FINAL EVALUATION REPORT
1992-93

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## EXECUTIVE SUMMARY

Effective Transition (Project E.T.) was an Elementary and Secondary Education Act (E.S.E.A.) Title VII-funded project in its second year of operation at Lafayette High School and Pershing Intermediate School of Community School District (C.S.D.) 20 in Brooklyn. In the year under review, Project E.T. served a total of 300 students of limited English proficiency (LEP) whose native language was Spanish, Cantonese, Mandarin, or another Chinese dialect. Participating students received instruction in English as a second language (E.S.L.); native language arts (N.L.A.); and the content area subjects of mathematics, science, social studies, and computer science. Peer tutoring in science was an integral part of the project. Students also received information on career options.

Teachers of participating students had the opportunity to attend staff development workshops. The project also reimbursed tuition for staff members taking courses on the college level.

Project E.T. established a parental component which included E.S.L. classes, meetings of the Bilingual Parent Advisory Committee, and school conferences.

Project E.T. met its objectives for N.L.A. in Cantonese; the content areas of mathematics, science, social studies, and computer education; attendance; curriculum development; career development for advisement; and staff development for increased awareness of pupil needs and problems. The project failed to meet its objectives for E.S.L., N.L.A. in Spanish, career development for conferences, and staff development for enrollment in university courses. The Office of Research, Evaluation, and Assessment (OREA) was unable to evaluate the objectives for dropout prevention and parental involvement because the project did not provide the required data.

The conclusions, based on the findings of this evaluation, lead to the following recommendations:

- Consider offering intensive E.S.L. on the literacy level at Lafayette High School, particularly for recent immigrants.
- Assess reasons for the lack of growth in participants' acquisition of skills in Spanish N.L.A. Consider initiating intensive training for the peer-tutors.
- Plan career conferences with enough lead time to guarantee site availability.
- Explore reasons why staff members did not attend university courses to increase their skills in bilingual education.
- Provide complete data so that OREA can effectively evaluate all objectives.

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This report has been prepared by the Bilingual, Multicultural, and Early Childhood Evaluation Unit of the Office of Educational Research. Thanks are due to Ms. Patricia Musante for collecting the data and writing the report.

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# I. INTRODUCTION

This report documents the Office of Research, Evaluation, and Assessment's (OREA's) evaluation of the Elementary and Secondary Education Act (E.S.E.A.) Title VII-funded project, Effective Transition (Project E.T.), in its second year in 1992-93.

## PROJECT CONTEXT

Project E.T. operated at Lafayette High School and Pershing Intermediate School in Community School District (C.S.D.) 20 in Brooklyn. The population in the community surrounding Pershing Intermediate School was mainly Latino and Asian-American, with a small number of European-Americans. The neighborhood was a mixture of middle- and low-income residents. The community surrounding Lafayette High School was mainly European-American (Italian), with a small number of Asian-American and Latinos, and was predominantly middle-income.

At Pershing Intermediate School, 1,547 students were registered in the 1991-92 school year (the last year for which this information was available). Fifty-eight percent were Latino, 21 percent were Asian-American, 16 percent were European-American, and 5 percent were African-American. Twenty-four percent of these students were of limited English proficiency (LEP), and 71 percent came from low-income families, as evidenced by their eligibility for the free-lunch program.

Of the 2,680 students who registered at Lafayette High School, 35 percent were African-American, 31 percent were European-American, 19 percent were Latino, and 15 percent were Asian-American. Sixteen percent of these students were LEP and 39 percent came from low-income families.

Both Pershing Intermediate School and Lafayette High School were housed in older buildings. The former was constructed in 1925 and the latter in 1939. Classrooms at Pershing Intermediate School needed repairs to their floors and window shades, general cleaning, and additional desks and chairs. Classrooms and hallways were overcrowded. Classrooms at Lafayette High School were well-lit and decorated with maps and multicultural posters, but student work was not in evidence.

## STUDENT CHARACTERISTICS

Project E.T. served LEP students in sixth through twelfth grade whose native languages were Spanish, Cantonese, Mandarin, or another Chinese dialect. Scores at or below the 40th percentile on the Language Assessment Battery (LAB) determined LEP status. Other student characteristics considered by the project were low native language literacy, as determined by review of academic records and teacher recommendations, and willingness to participate, as determined by personal interviews and the written permission of parents. See Table 1 for enrollment by grade levels.

TABLE 1

Number of Students in Project E.T., by Grade and Site

| Site | Grade | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| Pershing Intermediate School | 60 | 32 | 58 | | | | | 150 |
| Lafayette High School | | | | 40 | 53 | 42 | 15 | 150 |

The project served a total of 300 students; male students numbered 142 (47.3

percent) and female 158 (52.7 percent). Students whose native language was Spanish numbered 79 (26.3 percent); those whose native language was Cantonese numbered 198 (66 percent). Students whose native language was Mandarin numbered 11 (3.7 percent), and those whose spoke another Chinese language numbered 12 (4.0 percent). The majority of participants (57.7 percent) were born in China. The next largest group (10.3 percent) was from Hong Kong. (See Table 2 for countries of origin.) Most (93.3 percent) of the participants came from low-income families, as evidenced by their eligibility for the free-lunch program.

Needs Assessment

Before initiating programming, the project conducted a needs assessment of the targeted students and their families and of the educational staff who were to serve them. The data obtained from these studies indicated four primary needs: (1) to provide LEP students with intensive English and native language instruction and support services to improve their school performance; (2) to provide bilingual instruction in college and career orientation; (3) to offer staff development activities to heighten teachers' awareness of the needs and problems of LEP students and to improve their skills and effectiveness as bilingual educators; and (4) to obtain more effective articulation between intermediate and senior high schools.

TABLE 2

Students' Countries of Origin

| Country | Number of Students |
|---|---|
| China | 173 |
| Hong Kong | 31 |
| Dominican Republic | 20 |
| Mexico | 15 |
| United States | 15 |
| Puerto Rico | 10 |
| Honduras | 5 |
| Vietnam | 4 |
| Argentina | 3 |
| Ecuador | 3 |
| Guatemala | 3 |
| Other | 9 |
| Unreported | 9 |
| Total | 300 |

## PROJECT OBJECTIVES

### Student Objectives

- As a result of participation, 70 percent of the target students will demonstrate an appropriate increase in English language proficiency as indicated by significant improvement at the .05 level of statistical significance when results are analyzed using a correlated *t* test.

- As a result of participation, 70 percent of the students will demonstrate a significant increase in Spanish language achievement as indicated by significant improvement at the .05 level of statistical significance when results on a pre- and posttest of El Examen de Lectura en Español (ELE) are analyzed using a correlated *t* test.

- As a result of participation in the program 70 percent of the Cantonese-speaking students will demonstrate a significant increase in native language achievement by scoring at or above 65 in final course grades.

- As a result of participation, 70 percent of all targeted students will score at or above the passing criterion of 65 in the content area subjects of social studies, mathematics, science, and computer education.

- As a result of participation, students' attendance will be significantly higher than that of mainstream students.

- Program students will have a significantly lower dropout rate than similar non-program students.

Career Development Objectives

- All graduating students will meet with the bilingual resource specialists, bilingual grade advisors, or bilingual guidance counselors for advisement at least three times during the school year.

- The program will organize at least one conference for students in which representatives of business and industry will present information on math/science/computer options and skill requirements.

Staff Development Objectives

- As a result of participation, 80 percent of program staff will demonstrate an increase in awareness of pupil needs and pupil problems as indicated by a 5-point scale of problems and needs inventory, tabulating and ascertaining percentage of change.

- As a result of participation, 50 percent of program staff members will enroll in at least one university course each semester.

Curriculum Development Objectives

- By the second and third years (1993 and 1994), the curriculum specialists will have developed or translated one subject matter-oriented instructional guide for teaching (for either native language arts, math, science, social studies, or computer science) each year.

- By the first, second, and third years (June 1992, 1993, and 1994), the project staff will have completed at least ten science modules each year to be used in the peer tutoring component.

Parental Involvement Objective

- The proportion of program students' parents who participate in Open School Day/Evening will be equal to or greater than the proportion of mainstream students' parents who participate in this activity.

PROJECT IMPLEMENTATION

During the 1992-93 school year, Project E.T. provided instructional and support services to 300 Spanish-, Cantonese-, and Mandarin-speaking students and their families. The project's main goals were to offer newly-arrived bilingual students programming in order to improve the articulation between intermediate and high school and to promote the acquisition of language and content area skills in LEP students.

At Lafayette High School, only Cantonese- and Mandarin-speaking students received instruction in their native language in the content areas. The resource specialist reported that Spanish-speaking students were placed in mainstream content area courses because there were insufficient numbers to form bilingual classes.

Cantonese- and Mandarin-speaking students at Lafayette High School were offered content area courses five periods a week using English and the native language in varying proportions: sequential mathematics, global history, economics, and physical science were taught in Cantonese or Mandarin 60 percent of the time, human biology, applied chemistry, and industrial arts technology were taught in Cantonese or Mandarin 70 percent of the time.

At Pershing Intermediate School, mathematics, science, and social studies classes were taught using English supplemented by either Cantonese or Spanish in five out of six sections. One section of each content area course was taught exclusively in

the students' native language. The computer education course was taught exclusively in English. Project E.T. did not provide information on the relative instructional time in the students' native language and English for content area courses.

Peer-tutoring sessions in science at Pershing Intermediate School for both Chinese and Latino students used the students' native language 80 percent of the time. At Lafayette High School, the training of Chinese-speaking peer tutors was in Cantonese 80 percent of the time, while training for Spanish-speaking peer tutors was in English 100 percent of the time. Each met for two periods per week.

Project E.T. offered in-service staff development and parental involvement activities. The project also provided reimbursement to staff for college credits.

Materials, Methods, and Techniques

Project E.T. offered English as a second language (E.S.L.) on the literacy, beginning, intermediate, advanced, and transitional levels at Pershing Intermediate School, and at the beginning, intermediate, advanced and transitional levels at Lafayette High School. The project offered native language arts (N.L.A.) on a literacy to advanced placement level at Pershing Intermediate School and on a literacy to advanced level at Lafayette High School. The project did not indicate which languages were offered at each level.

Teachers of participating students used a wide array of strategies and techniques, including total physical response, pattern drills, peer tutoring, story-telling, the cloze procedure, and hands-on experiments. Audiovisual aids supplemented classroom instruction.

An innovative feature of the project was its peer tutoring component, the goal of which was to increase student motivation and performance by narrowing the gap between high school and intermediate school. Project students from Lafayette High School traveled bi-monthly to Pershing Intermediate School to offer hands-on science workshops to younger project students, using staff-developed modules in Chinese and Spanish. Project E.T. developed 16 science modules in English this year, and the resource specialist translated 15 of them into Chinese.

For a list of instructional materials used in the project, please see Appendix A.

Capacity Building

Participating sites will gradually contribute toward the purchase of most materials and supplies and the cost of the Title VII staff. During the third year of the project, tax levy funds will pay 40 percent of a resource specialist's salary, 20 percent of the cost of materials and supplies, and 70 percent of the cost of E.S.L. textbooks. At the end of the third year of the project, the sites plan to assume the total cost of programming.

Staff Qualifications

Title VII staff. The project director was fully funded and two resource specialists were partly funded by Title VII. For a description of their degrees and language proficiency (teaching or communicative*), see Table 3.

The project director's responsibilities included supervision and administration of

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*Teaching proficiency (TP) is defined as the ability to use LEP students' native language in teaching language arts or other academic subjects. Communicative proficiency (CP) is defined as a non-native speaker's basic ability to communicate and interact with students in their native language.

the project and provision of evaluation data. The resource specialists' responsibilities were to provide on-site coordination and supervision of both the project and the peer-tutoring component, act as liaison with the project office, provide support services to the bilingual education staff, advise students, communicate with the parents of project students, and establish a Parent Advisory Committee (PAC).

TABLE 3

Project Staff Qualifications

| Position Title | Degree(s) | Language Competence |
|---|---|---|
| Project Director | Ph.D | Spanish (TP) |
| Resource Specialist | M.S. | Cantonese (TP)<br>Mandarin (TP) |
| Resource Specialist | not provided | Cantonese (TP)<br>Mandarin (TP) |

Other staff. Tax-levy funds paid the salaries of the 41 classroom teachers who provided instructional services to project students. Eight teachers were TP and two CP in Spanish, 13 were TP in Chinese. Six were TP and three CP in other languages. Thirty-five teachers held master's degrees and five held bachelor's degrees. The project did not provide OREA with information on one of the teacher's degrees. Thirty-three of the 41 teachers had training in either bilingual education or E.S.L. Twenty-two teachers held high school certification in the subject area they taught; one teacher of E.S.L. held an ancillary E.S.L. certificate. All intermediate school teachers held appropriate certification in either the subject area they taught or in common branches.

Staff development. Four teachers received tuition assistance toward college courses in E.S.L. or bilingual education during the fall semester, and one received tuition assistance during the spring semester. During the fall semester, the project director, two resource specialists, and occasionally an assistant principal met regularly to discuss the administration of the project; the project director met once with two curriculum developers to discuss the development of the science modules. During the spring semester, eight teachers working with Chinese project students at Pershing Intermediate School met every two weeks to discuss bilingual education. The resource specialist at Lafayette High School attended workshops on bilingual science classroom activities and enhancing the Chinese student's participation in the classroom.

Instructional Time Spent on Particular Tasks

See Appendix B for examples of class schedules for Pershing Intermediate School. The project did not provide class schedules for Lafayette High School.

Length of Time Participants Received Instruction

Students had a mean of 5.2 years (s.d.=2.9) of education in a non-English-speaking school system and 2.9 years (s.d.=1.6) of education in the United States. The median time students participated in Project E.T. was 10 months.

Activities to Improve Pre-referral Evaluation Procedures

Teachers referred those students thought to be in need of special education services to the School-Based Support Team (S.B.S.T.) for evaluation. The S.B.S.T. at Pershing Intermediate School had one social worker who was proficient in Spanish and one who was proficient in a Chinese language. The S.B.S.T. at Lafayette High School had no members bilingual in Spanish or Chinese, and other staff translated as necessary.

Gifted and talented students were identified by teacher judgment and course grades.

PARENT AND COMMUNITY INVOLVEMENT ACTIVITIES

Project E.T. proposed to publish and disseminate a monthly bilingual newsletter but provided OREA with no information on its implementation. The project director reported that the proposed parent program in E.S.L. and general equivalency diploma (G.E.D.) skills operated only at Lafayette High School, because Pershing Intermediate School did not have funds to hire a custodian to cover evening and weekend events.

## II. EVALUATION METHODOLOGY

### EVALUATION DESIGN

#### Project Group's Educational Progress as Compared to That of an Appropriate Non-Project Group

OREA used a gap reduction design to evaluate the effect of language instruction on project students' performance on standardized tests. Because of the difficulty in finding a valid comparison group, OREA used instead the groups on which the tests were normed. Test scores are reported in Normal Curve Equivalents (N.C.E.s), which are normalized standard scores with a mean of 50 and a standard deviation of 21.1. It is assumed that the norm group has a zero gain in N.C.E.s in the absence of supplementary instruction and that participating students' gains are attributable to project services.

#### Applicability of Conclusions to All Persons Served by Project

Data were collected from all participating students for whom there were pre- and posttest scores. (There were no pretest data on students who entered the program late; therefore, posttest data for them will serve as pretest data for the following year.) Instruments used to measure educational progress were appropriate for the students involved. The LAB and El Examen de Lectura en Español (ELE) are used throughout New York City to assess the growth of English and Spanish skills in populations similar to those served by Project E.T.

INSTRUMENTS OF MEASUREMENT

OREA compared pre- and posttest scores on the LAB to assess the E.S.L. objective and the ELE to assess the Spanish N.L.A. objective. The Cantonese N.L.A. objective was assessed through course grades. The content area objective in mathematics, science, social studies, and computer education also was assessed through course grades, as specified.

All students were tested at the appropriate grade level. The language of the LAB and ELE was determined by the test itself.

According to the publishers' test manuals, all standardized tests used to gauge project students' progress are valid and reliable. Evidence supporting both content and construct validity is available for the LAB. Content validity is confirmed by an item-objective match and includes grade-by-grade item difficulties, correlations between subtests, and the relationship between the performance of students who are native speakers of English and students who are LEP. To support reliability, the Kuder-Richardson Formula 20 (KR20) coefficients and standard errors of measurement (SEM) are reported by grade and by form for each subtest and total test. Grade reliability coefficients, based on the performance of LEP students on the English version, ranged from .88 to .96 for individual subtests and from .95 to .98 for the total test.

The ELE was prepared by New York City educators who were native speakers of Spanish and represented several Latino linguistic and cultural groups. The ELE was administered in two forms to all New York City students who were receiving language

arts instruction in Spanish. For Form 1, the grade reliability coefficients ranged from .94 to .96. Comparable data for Form 2 will be generated as soon as possible after its administration in the spring of 1993. Items on the test were grade-specific. Construct validity is evidenced by grade-to-grade decreases in item difficulty within level. This characteristic reflects the acquisition of increased amounts of the underlying construct (reading proficiency) as students progress through the grades.

To assess the objectives for the ongoing education of teachers, OREA examined transcripts from the institution in which the staff members enrolled. OREA also developed and distributed Likert-type evaluation questionnaires for teachers to rate the quality, relevance, and usefulness of staff development activities (see Appendix C).

OREA used information on career advisement and career conference activities provided by the project director to evaluate the career development objectives.

To assess the curriculum development objectives, OREA used information provided by the project director on the development of science modules and their translation into Chinese.

In order to assess the parental involvement objectives, OREA used information provided by the project director on attendance at Open School Day/Evening.

## DATA COLLECTION AND ANALYSIS

### Data Collection

To gather qualitative data, an OREA evaluation consultant carried out on-site and telephone interviews of the project director several times during the school year and also observed two classes on each of two visits. The project evaluator collected the

data and prepared the final evaluation report in accordance with the New York State E.S.E.A. Title VII Bilingual Education Final Evaluation Report format, which was adapted from a checklist developed by the staff of the Evaluation Assistance Center (EAC) East in consultation with the Office of Bilingual Education and Minority Language Affairs (OBEMLA).

Proper Administration of Instruments

Qualified personnel received training in testing procedures and administered the tests. Test administrators followed guidelines set forth in the manuals accompanying standardized tests. Time limits for subtests were adhered to; directions were given exactly as presented in the manual.

Testing at Twelve-Month Intervals

Standardized tests were given at 12-month intervals, following published norming dates.

Data Analysis

Accurate scoring and transcription of results. Scoring, score conversions, and data processing were accomplished electronically by the Scan Center of the Board of Education of the City of New York. Data provided by the Scan Center were analyzed in the Bilingual, Multicultural, and Early Childhood Evaluation Unit of OREA. Data collectors, processors, and analysts were unbiased and had no vested interest in the success of the project.

Use of analyses and reporting procedures appropriate for obtained data. To assess the significance of students' achievement in English and Spanish, OREA

computed a correlated *t*-test on the LAB and ELE scores. The *t*-test determined whether the difference between the pre- and posttest scores was significantly greater than would be expected from chance variation alone.

The only possible threat to the validity of any of the above instruments might be that LAB norms were based on the performance of English Proficient (EP) rather than LEP students. Since OREA was examining gains, however, this threat was inconsequential—the choice of norming groups should not affect the existence of gains.

## III. FINDINGS

### PARTICIPANTS' EDUCATIONAL PROGRESS

#### Participants' Progress in English

Throughout the school year, students had ample opportunity to develop their English language skills.

The evaluation objective for English as a Second Language was:

- As a result of participation, 70 percent of the target students will demonstrate an appropriate increase in English language proficiency as indicated by significant improvement at the .05 level of statistical significance when results are analyzed using a correlated *t* test.

There were complete pre- and posttest scores on the LAB for 251 students from grades six through twelve. (See Table 4.) The mean gain of 5.7 N.C.E.S (s.d.=9.7) was statistically significant ($p<.05$), but only 59 percent of the students showed a gain.

Project E.T. did not meet its objective for English as a second language.

#### Participants' Progress in Native Language Arts

There were two evaluation objectives for N.L.A., one for Spanish and one for Cantonese.

- As a result of participation, 70 percent of the students will demonstrate a significant increase in Spanish language achievement as indicated by significant improvement at the .05 level of statistical significance when results on a pre- and posttest of El Examen de Lectura en Español (ELE) are analyzed using a correlated *t* test.

There were complete pre- and posttest scores on the ELE for 43 students, all from Pershing Intermediate School. The mean pretest score of 52.9 (s.d.= 19.6) and posttest score of 49.8 (s.d.= 21.6) yielded a loss of 3.16 (s.d.=13.1).

Project E.T. did not meet its N.L.A. objective in Spanish.

TABLE 4

Pretest/Posttest N.C.E. Differences on the
Language Assessment Battery, by Site

| Site | Total number of project students | Number of students for whom data were available | Pretest | | Posttest | | Difference | | *t* value |
|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | S.D. | Mean | S.D. | Mean | S.D. | |
| Pershing Intermediate School | 150 | 138 | 10.9 | 11.3 | 15.8 | 16.9 | 4.9 | 10.0 | 5.7* |
| Lafayette High School | 150 | 113 | 11.3 | 11.9 | 18.1 | 14.7 | 6.8 | 9.2 | 7.82* |
| Total | 300 | 251 | 11.1 | 11.6 | 16.9 | 16.0 | 5.7 | 9.7 | 9.35* |

*$p < .05$

- Project E.T. students at both sites made significant gains on the LAB.

- As a result of participation in the program 70 percent of the Cantonese-speaking students will demonstrate a significant increase in native language achievement by scoring at or above 65 in final course grades.

Over 80 percent of the students passed their Chinese N.L.A. courses both semesters. (See Table 5.)

Project E.T. met its N.L.A. objective in Cantonese.

LEP Participants' Academic Achievement

Teachers at Pershing Intermediate School used English supplemented by Spanish or Cantonese in content area classes, except for computer education, which was taught in English using an E.S.L. methodology. At Lafayette High School, instruction was in Cantonese and Mandarin; Spanish-speaking students were placed in mainstream content area courses. Teachers used a wide array of strategies and techniques, including cloze procedures, hands-on experiments, and peer tutoring.

TABLE 5

Passing Grades in Native Language Arts (Cantonese), by Site

| Site | Fall 1992 | | Spring 1993 | |
|---|---|---|---|---|
| | Number of students for whom data were reported | Percent Passing | Number of students for whom data were reported | Percent Passing |
| Pershing Intermediate School | 77 | 80.5 | 78 | 96.2 |
| Lafayette High School | 96 | 86.5 | 50 | 94.0 |
| Total | 173 | 83.8 | 128 | 95.3 |

- The percentage of students passing their Chinese N.L.A. courses was higher in the spring than in the fall.

The OREA evaluation consultant observed a seventh and eighth grade bilingual science class; part of the peer tutoring component at Pershing Intermediate School. Thirty-seven project students were crowded into a dirty classroom with broken floor tiles and torn window shades. The room did not have enough desks and chairs to accommodate all the students. A high school student leader explained in Spanish the scientific basis for seasonal changes. She used a styrofoam ball and light to demonstrate the rotation of the Earth on its axis and its revolution around the sun. Students conducted the experiment themselves after dividing into four groups. They appeared enthusiastic and highly motivated. Other high school student leaders answered, in both Spanish and English, the groups' questions about the experiment and the lesson handout. Later, the student leaders showed a film depicting the Earth's movement around the sun.

The OREA evaluation consultant observed a bilingual social studies class of 16 Cantonese-speaking project and non-project students at Lafayette High School. The classroom walls were decorated with posters describing the American government system and maps of the world and Southeast Asia. The lesson was about the political boundaries of Southeast Asia. The lesson was teacher-directed and used a content-based instructional methodology for language learning. The teacher named in English and Cantonese the countries and capitals of Southeast Asia. The class repeated them in English, then colored in the countries on their map handout. Later, the class read aloud in English from a handout on the geography, history, and cultures of Southeast Asia, then translated what was said into Cantonese.

The content area was:

> As a result of participation, 70 percent of all targeted students will score at or above the passing criterion of 65 in all the content area subjects of social studies, mathematics, science, and computer education.

Well over 70 percent of the project students passed each content area course each semester. (See Table 6.)

Project E.T. met its objective for the content area subjects of mathematics, science, and computer education.

## FORMER PARTICIPANTS' PROGRESS IN ENGLISH LANGUAGE CLASSROOMS

The project did not provide OREA with data on former project students.

## OVERALL EDUCATIONAL PROGRESS ACHIEVED THROUGH PROJECT

### Career Development Outcomes

The project proposed two career development evaluation objectives:

> All graduating students will meet with the bilingual resource specialists, bilingual grade advisors, or bilingual guidance counselors for advisement at least three times during the school year.

The resource specialists, grade advisors, and guidance counselors at the two sites advised graduating project students on career and educational options. In addition, books and pamphlets in English and Chinese regarding New York City public high schools were made available to Pershing Intermediate School students.

All graduating students met with the bilingual resource specialists, bilingual grade advisors, or bilingual guidance counselors for advisement at least three times during the school year.

The project met its career development objective for advisement.

TABLE 6

Passing Grades in Content Area Courses

| Site | Subtest | Fall 1992 | | Spring 1993 | |
|---|---|---|---|---|---|
| | | Number of students for whom data were reported | Percent Passing | Number of students for whom data were reported | Percent Passing |
| Pershing Intermediate School | Mathematics | 140 | 79.3 | 141 | 83.0 |
| | Science | 139 | 93.5 | 140 | 97.1 |
| | Social Studies | 140 | 89.3 | 141 | 97.2 |
| | Computer Education | 79 | 88.6 | 81 | 100.0 |
| Lafayette High School | Mathematics | 136 | 80.1 | 69 | 79.7 |
| | Science | 126 | 84.1 | 67 | 94.0 |
| | Social Studies | 139 | 87.1 | 70 | 90.0 |
| | Computer Education | 1 | 100.0 | 3 | 100.0 |

- Over 80 percent of students at both sites passed content area courses in both semesters.

- The program will organize at least one conference for students in which representatives of business and industry will present information on math/science/computer options and skill requirements.

The project director reported that difficulties in scheduling at Long Island University's Brooklyn campus prevented a career conference from being organized in the year under review. He indicated that the project planned to hold such a conference in the fall.

The project did not meet its career development objective for career conferences.

Grade Retention

Project E.T. did not propose any objectives for grade retention. One of the participating students (0.3 percent) was retained in grade.

Dropout Prevention

Project E.T. proposed the following dropout prevention objective:

- Program students will have a significantly lower dropout rate than similar non-program students.

No project students dropped out of Pershing Intermediate School; two project students (0.7 percent) dropped out of Lafayette High School. The project did not provide OREA with information on the schoolwide dropout rates.

OREA was unable to evaluate the objective for dropout prevention.

Attendance

The reading material and computer offered in the resource room were of interest to students and helped encourage attendance at Pershing Intermediate School. Staff regarded the peer-tutoring component as having served as another avenue for increasing student attendance.

The project had one attendance objective:

- As a result of participation, students' attendance will be significantly higher than that of mainstream students.

At Pershing Intermediate School, the attendance rate for project students was 95.8 percent, while the schoolwide rate was 88.7 percent. At Lafayette High School, the attendance rate for project students was 98.3 percent, while the schoolwide rate was 80.1 percent. (Both schoolwide rates are for 1991-92, the last year for which data are available.) The overall attendance rate for project students was 97 percent (based on 285 students), while the total school attendance was 84.4 percent. The rate for participating students was 12.6 percent higher than that of the total school population. This difference was significant ($p<.05$).

Project E.T. met its attendance objective.

Placement in Gifted and Talented Programs

Students at Pershing Intermediate School showing potential were eligible to enroll in a computer science course to learn various software programs. At Lafayette High School, students showing ability in science were encouraged to do special projects and referred to summer research programs.

No students were placed in a program for the gifted and talented.

Enrollment in Post-secondary Education Institutions

Five graduating seniors indicated that they would be enrolling in post-secondary educational institutions upon graduation.

CASE HISTORY

Z was in the eleventh grade at Lafayette High School. He had emigrated to the United States from Hong Kong four years previously. He worked in a restaurant after school to supplement the family income. Both his employment record and academic studies reflected his dedication, but his grades were poor. In the project, he sought out and received extra help from the resource specialist and he made great strides in his studies.

STAFF DEVELOPMENT OUTCOMES

The project proposed two staff development evaluation objectives:

- As a result of participation, 80 percent of program staff will demonstrate an increase in awareness of pupil needs and pupil problems as indicated by a 5-point scale of problems and needs inventory, tabulation and ascertaining percentage of change.

Project E.T. distributed an OREA-designed Likert-type evaluation questionnaire to 44 teachers and project staff members at the end of the school year. OREA received 20 completed questionnaires. (See Appendix C.) Eighty-five percent of the respondents indicated a heightened awareness of pupils' needs and problems and rated the project's quality as superior.

Project E.T. met its staff development objective for increased awareness of pupils needs and problems.

- As a result of participation, 50 percent of program staff members will enroll in at least one university course each semester.

One resource specialist and three teachers completed university courses in the fall semester, and one resource specialist completed a university course in the spring semester.

The project did not meet its staff development objective for enrollment in university courses.

CURRICULUM DEVELOPMENT OUTCOMES

Project E.T. proposed two curriculum development evaluation objectives:

- By the second and third years (1993 and 1994), the curriculum specialists will have developed or translated one subject matter-oriented instructional guide for teaching (for either native language arts, math, science, social studies, or computer science) each year.

In the year under review, the resource specialists translated 15 science modules into Chinese.

The project met its curriculum development objective for instructional guides.

- By the first, second, and third years (June 1992, 1993, and 1994), the project staff will have completed at least ten science modules each year to be used in the peer tutoring component.

The resource specialists developed 16 science modules in the year under review.

The project met the objective for developing science modules.

PARENTAL INVOLVEMENT OUTCOMES

Parent E.S.L. classes were offered every Tuesday and Thursday evening at Lafayette High School. A parent advisory council (PAC) met four times during the school year. Sixty parents of project students attended a festival that included ethnic foods, costumes, music, and dancing.

Project E.T. proposed the following parental involvement evaluation objective:

- The proportion of program students' parents who participate in Open School Day/Evening will be equal to or greater than the proportion of mainstream students' parents who participate in this activity.

Parents received written notification in their home language of Open School Day/Evening. The resource specialist at Lafayette High School also telephoned many Chinese-speaking parents, and reminded Spanish-speaking students to speak to their parents about the event. Attendance records, however, were not kept.

The project did not supply OREA with data to evaluate its parental involvement objective.

## IV. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

### ACHIEVEMENT OF OBJECTIVES

Project E.T. met its objectives for N.L.A. in Cantonese; the content areas of mathematics, science, social studies, and computer education; career advisement; attendance; staff's increased awareness of pupil problems and needs; and curriculum development. The project failed to meet its objectives for E.S.L., Spanish N.L.A., career conferences, and staff enrollment in university courses. OREA was unable to evaluate the objectives for dropout prevention and parental involvement, because the project did not provide the required data.

Participating students in Project E.T. achieved academic success. Of the 300 participating students in grades six through twelve, 299 were promoted to the next grade. Over half (59 percent) of the participating students showed significant gains in English as measured by gains on the LAB. Students showed appreciable gains in Chinese N.L.A. and the content areas.

Project services increased the students' understanding of the significance of education. The attendance rate of the project students was considerably higher than the schoolwide rate. Additionally, all graduating project students met with the bilingual resource specialist, grade advisor, or guidance counselor to discuss career and education options at least three times during the school year. Unfortunately, students did not have the opportunity to attend a career conference as the project had proposed.

While only a few participating staff members attended graduate courses to increase their knowledge of bilingual education and provide better services for the students, most reported that the project had increased their understanding of the needs and problems of LEP students. Project staff developed and translated into Chinese many science modules for the peer tutoring component of the project.

## MOST AND LEAST EFFECTIVE COMPONENTS

Highly effective components of Project E.T. were the peer tutoring in science, Cantonese N.L.A., and the curriculum development compcnent. Quantitative data, reports of observers, and the feedback from those administering the program attested to the strength shown in these areas.

The least effective component of the project was Spanish N.L.A.

## RECOMMENDATIONS TO ENHANCE PROJECT EFFECTIVENESS

- Consider offering intensive E.S.L. on the literacy level at Lafayette High School, particularly for recent immigrants.
- Assess reasons for the lack of growth in participants' acquisition of skills in Spanish N.L.A. Consider initiating intensive training for the peer-tutors.
- Plan career conferences with enough lead time to guarantee site availability.
- Explore reasons why staff members did not attend university courses to increase their skills in bilingual education.
- Provide complete data so that OREA can effectively evaluate all objectives.

APPENDIX A

Instructional material, cont'd

***E.S.L.***

| Grade | Title | Author | Publisher | Date of Publication |
|---|---|---|---|---|
| Beginning & Intermediate | Side by Side Text & Workbook 1A, 2A, 2B | Molinsky & Bliss | Prentice Hall | 1983 |
| Beginning & Intermediate | Line by Line 1A, 1B, 2A, 2B | Molinsky & Bliss | Prentice Hall | 1983 |
| Beginning, Intermediate, & Advanced | Grammar Work 1, 2, 3, 4 | P. Breyer | Prentice Hall Regents | 1982 |
| Beginning & Intermediate | Skill Sharpeners 1, 2, 3, 4 | DeFilippo & Skiamore | Addison- Wesley | 1984 |
| Beginning & Intermediate | English with a Smile | Zaffran & Kulik | National Textbook Co. | 1985 |
| Transitional | Stories We Brought With Us | Kasser & Silverman | Prentice Hall | 1986 |
| Advanced Transitional | Great American Stories 1, 2 | C.G. Draper | Prentice Hall | 1985 |
| Advanced Transitional | Modern Curriculum Literature | Frank & Hutching | Modern Curriculum Press | 1987 |
| Advanced | Little Stories for Big People | Gonshack | Prentice Hall Regents | 1976 |
| Beginning-Advanced | World of Vocabulary | Rauch & Weinstein | Global Books | 1981 |
| 10th | Easy Reading Selections in English | Dixon | Prentice Hall Regents | 1984 |
| 10th | Turning Points 2 | Iantorno & Papa | Addison & Wesley | 1986 |
| 10-11 | Turning Points 3 | Iantorno & Papa | Addison & Wesley | 1989 |
| 10-12 | Sherlock Holmes | Conan Doyle | Globe Books | 1987 |
| * | Resource Book for Teachers | Morgan & Rinvolucri | Oxford | * |
| * | Techniques in Teaching Vocabulary | French Allen | Oxford | * |
| * | Learning Purpose and Language Use | Widdowson | Oxford | * |

*Not supplied by project.

APPENDIX A

Instructional material, cont'd

| Grade | Title | Author | Publisher | Date of Publication |
|---|---|---|---|---|
| * | Using What We Know About Learning | Association for Supervision and Curriculum Development | Hosford | * |
| * | Oxford Elementary Learner's Dictionary of English | Burridge | Oxford | * |
| * | Oxford Student's Dictionary of Current English | Hornby | Oxford | * |
| * | Speaking Up at Work | * | Oxford | * |
| * | A Learner's Dictionary of English Idioms | McCaig & Manser | Oxford | * |
| * | Practice with Idioms | Feare | Oxford | * |
| * | Oxford Dicitionary of Current Idiomatic English, V.2 | Cowie, Mackin & McCaig | Oxford | * |
| * | The Grammar Handbook | Feigenbaum | Oxford | * |
| * | Techniques and Resources in Teaching Grammar | Celce-Murcia & Hilles | Oxford | * |
| * | A Basic English Grammar | Eastwood & Mackin | Oxford | * |
| * | Critical Reading & Writing for Advanced E.S.L. Students | Scull | Prentice Hall Regents | * |
| Intermediate | Yesterday and Today in the U.S.A. | Harris Live | Prentice Hall Regents | * |

*Not supplied by project.

APPENDIX A

Instructional material, cont'd

***N.L.A.***

| Grade | Title | Author | Publisher | Date of Publication |
|---|---|---|---|---|
| 6-7 | Stories from Classical Allusion | Peng, Minghui | Overseas Chinese Library | 1987 |
| 6 | Chinese Fables | Tung, Chung-Ssu | Overseas Chinese Library | 1986 |
| 6-8 | Chinese Heritag and Culture Resource Manual | Division of Bilingual Education | New York City Board of Education | * |
| 6-8 | Chinese-Americans: Unity Through Diversity | * | New York City Board of Education | * |
| 6-8 | Old Traditions, New Directions | * | New York City Board of Education | * |
| 6-8 | Bilingual Resource Library of Chinese Educational Resources and Cultural Materials | Division of Bilingual Education | New York City Board of Education | * |
| 6-8 | Asian and Pacific Island Curricular Materials and Professional Development Materials | * | EDAC-LA Catalogue | * |
| 6 | Chinese L.A. | Department of Education Taiwan | Republic of China | 1975 |
| 6-8 | Spanish is Fun, 1, 2 | Heywood Wald | Amsco | 1991 |
| 7 | Realidad, Fantasia, Literatura y Arte | * | Holt, Reinhart, & Winston | * |
| 6 | Leyendas Latinoamericanas | * | National Textbook | * |
| 6 | Relatos Latinoamericanos | * | National Textbook | * |
| 10 | Writing Manual | Yumin Ba, et.al. | China Publishing Co. | 1991 |
| 12 | Active Learning: Reading & Writing | Wanhua Li, et. al | China Publishing Co. | 1992 |
| 9-10 | Chinese Language Art | Byonghye Chang | Dissemination Assessment Center | 1993 |
| Beginning | Leyendas Latinoamericanas | Genevieve Barlow | National Textbook Co. | 1991 |
| 9-12 | Conversar Sin Parar | George Routes | * | 1982 |
| 9-12 | Capuseta en Manhattan | Carmin Martin Gaite | Ediciones Siruela Madrid | 1990 |
| Intermediate | Teatro Moderno Hispanico | Nina Lee Weisinger (ed.) | National Textbook | 1992 |

*Not provided by project.



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APPENDIX A

Instructional material, cont'd

***Mathematics***

| Grade | Title | Author | Publisher | Date of Publication |
|---|---|---|---|---|
| 6-8 | Foresman Math | L. Carey Bolster | Foresman | 1983 |
| 6-8 | Exito en las Matemáticas | Vogeli | Silver Burdett | 1983 |
| 6-8 | Building Skills in Mathematics, Tan, Purple, Red | * | Merril Basic Skills | * |
| 6-8 | Mathematics for Today, Green | * | Sadlier-Oxford | * |
| 6-8 | Workbook for New Progress in Mathematics, Green | * | Sadlier-Oxford | * |
| 6-8 | Student Workbook to Accompany Basic Mathematics Skills | * | Media Materials, Inc. | * |
| 6-8 | Math Mastery | Evans | West Sea Pub Co. | * |
| 6-8 | Aftermath, III | | Creative Publications | * |
| 6-8 | Practical Mathematics | Ross & Ross | Pacific Press | * |
| 6-8 | Life Skills Math | Mosenfelder | Education Design, Inc. | * |
| 6-8 | Math: For the World of Work | Crowell | Education Design, Inc. | * |
| 6-8 | Consumer Mathematics Workbook | Lange | Houghton-Mifflin | * |
| 6-8 | Math Skills for Daily Living, Decimals | * | Denoyer-Geppert | * |
| 6-8 | Math Skills for Daily Living, Ratio, Proportion, and Percent | * | Denoyer-Geppert | * |
| 6-8 | Basic Math, Teacher's Annotated Edition | * | Random House/McCormick-Mathers | * |
| 10-11 | Integrated Mathematics | Dressler & Keenan | Amsco | 1989 |

*Not provided by project.

APPENDIX A

Instructional material, cont'd

***Science***

| Grade | Title | Author | Publisher | Date of Publication |
|---|---|---|---|---|
| 7 | Biology of Plant & Animals | Kelley | Quercus Corp. | 1984 |
| 7 | RCT Science Review III | Bowne | NYC Board of Eduction | 1985 |
| 6-8 | Enfasis en la Ciencia, Orange, Blue, Green | Sund | Charles E. Merill | 1985 |
| 6-8 | Addison-Wesley Science | Rockcastle | Addison-Wesley | 1984 |
| 7 | Biology Workshop, Understanding Living Things | Rosen | Globe | 1988 |
| 6 | Natural Science | Department of Education | Republic of China, Taiwan | 1992 |
| 7 | Life Science | Department of Education | New York City Board of Education | 1992 |
| 8 | Earth Science | Dep. of Education | Merrill Publishing Co. | 1992 |
| 6-8 | Chinese Supplemental & Text for Biology | Seward Park High School, Chinese Bilingual Program | Merrill Publishing Co. | 1992 |
| 6-8 | Los Seres Vivientes, Ciencia 7 | * | Merrill Publishing Co. | * |
| 6-8 | La materia y la energia, Ciencia 8 | * | Ediciones SM | * |
| 6-8 | La polución de los mares | Tony Hare | Ediciones SM | * |
| 6-8 | La lluvia ácida | Tony Hare | Ediciones SM | * |
| 6-8 | Los oceanos | Lucy Baker | Ediciones SM | * |
| 6-8 | La destrucción de los hábitats | Tony Hare | Ediciones SM | * |
| 6-8 | La tierra | Riesco y Lopez | Editorial Bruno | * |
| 6-8 | La electricidad | Riesco y Lopez | Editorial Bruno | * |
| 6-8 | El mundo vegetal | Mercedes Gomez | Editorial Bruno | * |
| 6-8 | La materia | Riesco y Lopez | Editorial Bruno | * |
| 6-8 | Fuentes de energía | Hidalgo y Rivillo | Editorial Bruno | * |
| 6-8 | Ecología y medio ambiente | Bac del Rio | Editorial Buno | * |
| 6-8 | Física cercana | Ortiz & Santos | Editorial Bruno | * |
| 6-8 | El cuerpo Humano, 2 | Valero & Valero | Editorial Bruno | * |

*Not provided by project.

APPENDIX A

Instructional material, cont'd

## Science

| Grade | Title | Author | Publisher | Date of Publication |
|---|---|---|---|---|
| 6-8 | Introducción a las ciencias | * | Colección Alinorma | * |
| 6-8 | La capa de ozono | Tony Hare | Ediciones SM | * |
| 6-8 | Los residuos tóxicos | Tony Hare | Ediciones SM | * |
| 6-8 | Los desiertos | Lucy Baker | Ediciones SM | * |
| 6-8 | Los residuos radioactivos | Lucy Baker | Ediciones SM | * |
| 6-8 | Diccionario ilustrado de ciencias | Godman | Editorial Everest S.A. | * |
| 6-8 | Introducción a las ciencias químicas | Diaz Cubero | Compañia Cultural Editora y Distribuidora de Textos Americanos, S.A. | * |
| 6-8 | Introducción a las ciencias biologicas | Diaz Cubero | Distribuidora Escolar, Inc. | * |
| 9 | Biology | Oxenhorn | Globe Book Co. | 1974 |
| 10 | Science | Engineering: Terms, Tables, and Skills | Woodruff | 1966 |
| 10 | Science | Chemistry: The Chemical World | Darlington & Eigenfeld | 1977 |

*Not provided by project.

APPENDIX A

Instructional material, cont'd

## *Social Studies*

| Grade | Title | Author | Publisher | Date of Publication |
|---|---|---|---|---|
| 6-8 | America's History (Chinese Version) | Byoungh ye Chang | ESEA Title | 1984 |
| 6 | World Geography & You | Bernstein | Steck Vaughn Co. | 1986 |
| 7-8 | America's History, I & II | Bernstein | Steck Vaughn Co. | 1986 |
| 7 | The Road to Independence | Ura & Ura | Globe Book Co. | 1987 |
| 8 | Nueva Historia de los Estado Unidos | Bakerak (ed.) | Minerva Book, Ltd. | 1991 |
| 6-8 | Glosario Bilingue de Estudios Sociales/Bilingual Glossary of Social Studies | * | New York City Board of Education | * |
| 9 | World Cultures (Exploring) | Newhill & Paglia | Ginn & Co. | 1986 |
| 12 | Economics (Institutions & Analysis) | Antell | Amsco | 1987 |
| 6-8 | Computers: Programming and Applications | Maisel | Science Research Associates | * |
| 6-8 | Computer Literacy Through Applications | Kurshan, November, & Stone | Houghton-Mifflin | * |
| 6-8 | MS-DOS 5.0 Getting Started | * | NEC | * |

*Not provided by project.

APPENDIX A

Instructional material, cont'd

## *Computer Education*

| Grade | Title | Author | Publisher | Date of Publication |
|---|---|---|---|---|
| 6-8 | Microsoft Windows 3.1, Getting Started Guide & User's Guide | * | NEC | * |
| 6-8 | PowerMate SX/20 vi User's Guide & Quick Start Guide | * | NEC | * |
| 6-8 | User's Guide for the IBM Laser Printer | * | IBM | * |
| 6-8 | Getting Started with the IBM Laser Printer | * | IBM | * |
| 6-8 | Technical Reference for the IBM Laser Printer | * | IBM | * |
| 6-8 | IBM Laser Printer Software Applications/ Drivers Information | * | IBM | * |
| 6-8 | Supplies/Options Catalog for the Laser Printer 4019 and 4029 Series Printers | * | Addison-Wesley | * |
| 6-8 | Using Computers, Solutions Manual & Teacher's Commentary | * | Media Materials, Inc. | * |
| 6-8 | Basic Steps to Basic, Student Workbook | * | EDC Publishing | * |
| 6-8 | Practice your Basic, Puzzles, Test and Problems to Improve your Skills | Usborne/Hayes | EDC Publishing | * |
| 6-8 | Practical Things to do with a Microcomputer | Usborne/Hayes | EDC Publishing | * |
| 6-8 | Introduction to Computer Programming, Basic for Beginners | Hayes | * | * |
| 6-8 | Understanding the Micro, How it Works and What it Can Do | Hayes | EDC Publishing | * |
| 6-8 | Computer Jargon | * | EDC Publishing | * |

*Not provided by project.

APPENDIX B

Class Schedules

***Pershing Intermediate School***

| Period | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| 1 | computer education | Spanish | music | Spanish | language arts |
| 2 | language arts | science | social studies | social studies | Spanish |
| 3 | mathematics | language arts | mathematics | language arts | mathematics |
| 4 | lunch | lunch | lunch | lunch | lunch |
| 5 | social studies | social studies | science | mathematics | social studies |
| 6 | h & cs | h & cs | Spanish | art | science |
| 7 | science | mathematics | language arts | science | h & cs |
| 8 | physical education | music | art | computer education | physical education |

APPENDIX B

Class Schedules, cont'd.

***Pershing Intermediate School***

| Period | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| 1 | social studies | mathematics | computer education | mathematics | mathematics |
| 2 | Chinese | language arts | Chinese | language arts | Chinese |
| 3 | music | science | mathematics | science | language arts |
| 4 | lunch | lunch | lunch | lunch | lunch |
| 5 | mathematics | social studies | language arts | music | Chinese |
| 6 | E.S.L. | E.S.L. | E.S.L. | E.S.L. | E.S.L. |
| 7 | language arts | Chinese | social studies | social studies | social studies |
| 8 | science | physical education | science | physical education | science |

APPENDIX B

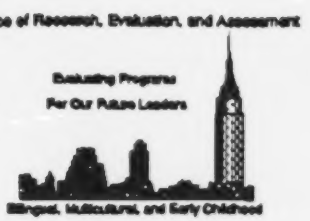
Class Schedules, cont'd.

***Pershing Intermediate School***

| Period | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| 1 | art | mathematics | Spanish | Spanish | mathematics |
| 2 | mathematics | art | mathematics | language arts | Spanish |
| 3 | language arts | science | language arts | mathematics | science |
| 4 | computer education | Spanish | science | Spanish | computer education |
| 5 | physical education | science | physical education | science | language arts |
| 6 | lunch | lunch | lunch | lunch | lunch |
| 7 | E.S.L. | E.S.L. | E.S.L. | E.S.L. | E.S.L. |
| 8 | social studies | social studies | social studies | social studies | social studies |

APPENDIX C
Likert Scale

BILINGUAL, MULTICULTURAL, AND EARLY CHILDHOOD EVALUATION
OFFICE OF RESEARCH, EVALUATION, AND ASSESSMENT
NEW YORK PUBLIC SCHOOLS
110 LIVINGSTON STREET, ROOM 732
BROOKLYN, N.Y. 11201
(718) 935-3790


Office of Research, Evaluation, and Assessment
Evaluating Programs
For Our Future Leaders
Bilingual, Multicultural, and Early Childhood

# Staff Awareness
## Spring 1993

5 5
1 2

Program: **Project E.T.**

| Directions: | Please write the numbers that show how you feel in the boxes on the right. |
|---|---|

1. Since participating in Project E.T., to what degree have you become **more aware** of students' needs?

| Not more aware at all | \|__\|__\|__\|__\|__\| | Extensively aware |
|---|---|---|
| | 1 2 3 4 5 | |

☐ 3

2. Since participating in Project E.T., to what degree have you become **more aware** of students' problems?

| Not more aware at all | \|__\|__\|__\|__\|__\| | Extensively aware |
|---|---|---|
| | 1 2 3 4 5 | |

☐ 4

3. What is your overall assessment of the project?

| Poor quality | \|__\|__\|__\|__\|__\| | Superior quality |
|---|---|---|
| | 1 2 3 4 5 | |

☐ 5

4. List what you consider to be the three most significant needs/problems that students have.

_____

_____

_____

_____

**Thank you very much for your assistance.**